

Attorney Docket No. 030475

PATENT
Serial No. 10/789,605**REMARKS**

Claims 1-36 are pending in the present application. In the above amendments, claims 1-30, and 35-36 have been amended.

In the Office Action mailed April 25, 2006, the Examiner rejected claims 1-29, under 35 U.S.C. §112. The examiner rejected claims 1-36 under U.S.C. §101 because the claimed invention lacks patentable utility. The Examiner rejected claims 1, 5, 6, 25, 28-30, 35 and 36 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4063038A by Kaul, et al. (hereinafter "Kaul"). The examiner rejected claims 2-4, 26, and 34 under 35 U.S.C. §103(a) as being unpatentable over Kaul in view of U.S. Patent No. 6907084B2 by Jeong et al. (hereinafter "Jeong"). The examiner rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over Kaul in view of U.S. Patent No. 4901319A by Ross et al. (hereinafter "Ross"). The examiner rejected claims 8-9 under 35 U.S.C. §103(a) as being unpatentable over Kaul and Ross in view of Jeong. The examiner rejected claim 10 under 35 U.S.C. §103(a) as being unpatentable over Kaul and Ross in view of U.S. Patent No. 6798852B2 by Khayrallah et al. (hereinafter "Khayrallah"). The Examiner rejected claims 11 and 12 under 35 U.S.C. §103(a) as being unpatentable over Kaul and Ross in view of U.S. Patent No. 6496543 by Zehavi et al. (hereinafter "Zehavi"). The Examiner rejected claim 13 under 35 U.S.C. §103(a) as being unpatentable over Kaul in view of U.S. Patent No. 6392572 B1 by Shiu et al. (hereinafter "Shiu"). Claims 14, 15, 20, 21, 23, 24, and 31-34 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kaul. The Examiner rejected claim 22 under 35 U.S.C. §103(a) as being unpatentable over Kaul in view of U.S. Patent No. 5742640A by Haoui et al. (hereinafter "Haoui"). Claim 27 is rejected under 35 U.S.C. §103(a) as being unpatentable over Kaul and Jeong in view of Khayrallah.

Applicants respectfully respond to this Office Action.

35 U.S.C. §112

Applicants respectfully traverse the argument regarding claims 1-29 as being incomplete for omitting essential elements. Nonetheless, to reduce the issues under consideration,

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Applicants have amended each claim reciting "communication device" to "apparatus". Applicants reserve the right to reintroduce the unamended claims in a future application.

With respect to claim 5, Applicants assert that the term "twice the number" is well understood to mean two times the number. The number of the plurality of third values will be readily discernible in any given embodiment, and so twice that number will also be definite. Those of skill in the art will readily determine the significance of twice the number of the plurality of third values.

This respect to claim 24, the claim has been amended per the Examiner's suggestion.

35 U.S.C. §101

Applicants respectfully traverse the argument that claims 1-29 lack patentable utility. Nonetheless, to reduce the issues under consideration, and to move the case forward toward completion, Applicants have amended claims 1-29, 35 and 36 to clarify the deinterleaving functionality, per the Examiner's suggestion. Applicants reserve the right to reintroduce the unamended claims in a future application. Note that claims 30-34 already specified deinterleaving as utility.

AMENDMENTS

Applicants do not concede to the Examiner's characterization of the present claims, nor of the prior art cited. A partial rebuttal for the various claims is included below. However, to reduce the issues under consideration, Applicants have entered additional amendments to address the Examiner's concerns in light of the prior art cited. While reserving the right to pursue the unamended claims in a future application, Applicants believe the claims as amended put the case in condition for allowance.

In general, the amendments clarify the relationship between the first, second, and third values. The plurality of third values are generated in response to received symbols, including a first and second value. In one embodiment, for example, the received symbol includes at least one I and Q pair for the first and second values. Furthermore, the limitation of the storing pattern

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is clarified in its relationship to deinterleaving. The latter amendments also address the Examiner's §101 concerns as well.

The following rebuttals are brief, as they may be rendered moot in light of the current amendments. They are included to retain the right to revisit these arguments, should the need arise.

35 U.S.C. §102

The standard for anticipation under §102 requires "the presence in a single prior art disclosure of all elements of a claimed invention arranged as in that claim." *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 138, 231 U.S.P.Q.D (BNA) 644, 646 (Fed. Cir. 1998) (*quoting Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 1101, 227 U.S.P.Q. (BNA) 337, 350 (Fed. Cir. 1985)) (*additional citations omitted*). Applicants assert that Kaul does not teach simultaneous storing, according to a storage pattern, of the third plurality of storage values. In addition, the Examiner has held the S/P block to be the mapper of claim 1, while, responding to claim 22, asserts that the S/P block is substantially a MUX, and therefore a substitute for an additional element of the claim. Applicants note that this is not consistent with showing each element of the claim, arranged as in that claim, as that block is not both the mapper, and a plurality of tri-state buses (or a mux, for that matter). Furthermore, Applicant traverses the claim that the S/P block serves as the mapper, as spelled out in claim 1 (and similar claims). In addition, in all the claims in which a storing pattern is described, Examiner has failed to show where Kaul, or other references, teach a storing pattern. These examples are not exhaustive.

With respect to claim 5, Applicant is unclear on the meaning of the Examiner's note. If the included amendments do not render this issue moot, a clarification is requested.

35 U.S.C. §103

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation of, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference(s) must teach or suggest all the claim limitations.

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For each §103(a) rejection in this Office Action, Applicants submit: the prior art of record does not provide a suggestion or motivation to modify the reference; there is not a reasonable expectation of success, and the reference does not teach or suggest all the claim limitations. See the above response for a partial shortcomings of Kaul in teaching the limitations of claims 1, 29, 30, 35, and 36. Therefore, the same rebuttal applies to the arguments for rejecting all the dependent claims, as Kaul served as the basis for each. Additional arguments will be reserved for an appropriate future response, if necessary. A few additional notes are included below.

The Examiner's response is unclear as to the grounds for rejection for claims 20 and 33. If the included amendments do not render this issue moot, a clarification is requested.

With respect to claims 14, 15, 20, 21, 23, 24, and 31-34, the Examiner makes a §103(a) rejection based solely on the Kaul reference. However, Kaul does not teach each of the limitations of these claims. No reference is supplied to provide such teaching. If the Examiner is relying on personal knowledge to support each finding of what is known in the art, Applicants request that the Examiner provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding per 37 CFR 1.104(d)(2).

In light of the amendments made, the rejection to each of the pending claims should be withdrawn. In addition, the rejections should be withdrawn in light of the above arguments.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application is earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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